

# DOCUMENT RESUME

ED 099 107

PS 007 520

**AUTHOR** Borich, Gary D.; And Others  
**TITLE** Differences and Sources of Criterion Bias in Child and Adult Values.  
**SPONS AGENCY** Office of Education (DHEW), Washington, D.C.  
**PUB DATE** [74]  
**NOTE** 15p.  
  
**EDRS PRICE** MF-\$0.75 HC-\$1.50 PLUS POSTAGE  
**DESCRIPTORS** \*Adults; Age Differences; \*Bias; \*Elementary School Students; Factor Analysis; Occupations; Prediction; Race; Racial Differences; Religion; Religious Differences; \*Research Criteria; Sex (Characteristics); Sex Differences; \*Values  
**IDENTIFIERS** \*Home and School Values Project

## ABSTRACT

This study investigated the influences of sex, occupation, race, and religion on child and adult values. The research is part of the Home and School Values Project which seeks to identify value statements and to compare such statements to the values actually espoused by different groups presumed to differ in their acceptance of cultural values. Preliminary analyses were conducted to identify similarities between child and adult value structures. Subjects were 226 sixth and seventh grade children and 137 adults from the Austin, Texas metropolitan area. The four influences of sex of respondent, occupation of adult respondent, or head of household (children), race, and religion were chosen because of earlier studies indicating their influence on values. The four variables were examined using the same subjects and methods involved in the preliminary analyses. Results of the study indicated that children and adults generally hold different values and that these values are influenced by different sources. For adults, only race was a notable influence, affecting values pertaining to allegiance to God and country. Evidence indicated that the values of children are more easily influenced by the variables; in over half of the significant findings, differences in sex, race, and religion occurred in the extent to which children valued their independence. (SDH)

## Differences and Sources of Criterion Bias in Child and Adult Values<sup>1</sup>

Gary D. Borich, Robert F. Peck  
The University of Texas at Austin

and T. Antionette Ryan  
The University of Hawaii

As with any psychological study, systematic sources of bias, both known and unknown, are likely to enter into the criterion measure. This is especially true when the study attempts to measure developmental behaviors that are expected to evolve as a natural function of growth and socialization, such as with the study of values. The following study was designed to control four sources of criterion bias and to study their effect upon the values of children and adults. Sex, occupation, race and religion were studied in relation to values assessed by the Home and School Value Scale (Ryans, 1970).

This research forms part of the Home and School Values Project, initiated in 1969 by David Ryans and led since 1970 by T. Antionette Ryan, both of The University of Hawaii. The long-range purpose of the project stems from the oft-repeated but largely untested view that some of our major difficulties in education and in instituting social policy stem from a conflict or a lack of correspondence between the values of children and their teachers and various subgroups, particularly economically or socially disadvantaged groups, and the social institutions to which they belong. Consequently, the project sought to identify value statements that might identify such areas of conflict or noncorrespondence of values, and then to use them to compare the values actually

---

<sup>1</sup>This study was supported in part by grants from the U. S. Office of Education. The opinions expressed herein do not necessarily reflect the position or policy of the Office of Education and no official endorsement by the Office of Education should be inferred.

espoused by different groups who were presumed to differ in their acceptance of cultural values.

Logical predictions about the results from such comparisons can be made with regard to differences among sexes (McCandless, Roberts, and Starnes, 1972), occupational groups (Warner, Meeker, and Eells, 1949), races (Peck, 1967) and religions (Morris, 1956). These predictions are that (a) females, particularly elementary school girls, hold cultural values that are incongruent with their male counterparts, (b) laborers and white collar workers hold cultural values that are incongruent with those held by professionals, (c) the cultural values of those who practice a religion are incongruent with the values held by those who have no religion, and (d) white Anglos hold cultural values incongruent with those of any minority group.

If these logical predictions are correct, their educational and social implications are clear: teacher practices and social policies which assume a core of values common to all subgroups may inadvertantly foster the bifurcation of values or, alternatively, teachers and social institutions must play an increasing role in taking such cultural value differences into account when instructing or designing social policy. Teachers and social institutions, in the light of adequate empirical evidence, may not be able to assume a monolithic core of values acceptable to all subgroups and all subcultures. Current educational practices may, for example, exerbate the frustrations that disadvantaged children experience in school by not taking value differences into account, and, inadvertantly increase the rate of school or societal drop-outs among the very groups that could most benefit from school.

Before designing the following study, the authors searched in vain for coherent, comparable-sample empirical research that dealt with cultural value

differences among sex, occupation, ethnic, and religious groups. The following study was motivated by the dearth of such studies and was conducted in the belief that useful information can be provided when the effects of all four of these variables upon the values of children and adults are studied.

### Preliminary Analyses

In 1970, the Home and School Values Project categorized a large, diversified pool of value statements drawn from previous research on values (Bales and Couch, 1969). From these statements 255 items were constructed in parallel forms for children, parents and teachers, totaling 765 items in all. From this pool was drawn the smaller sample of items used in the present study.

In order to identify similarities between child and adult value structures, two factor analyses were conducted on data derived from the Home and School Values Instrument. The first factor analysis was conducted on 137 adults sampled without stratification on the potential sources of bias and the second on 226 sixth and seventh grade children sampled in the same manner. Respondents were selected in a manner that assured their independence, i.e., no adult and child came from the same household. Responses were broken into principal components and rotated to simple structure.

Results of the factor analyses revealed a different number of factors for the adult and child samples. Four factors were identified for the adult sample and three factors for the child sample. For the adult sample

these factors, their respective eigen values and several example scale items with their factor loadings were:

- I. Allegiance to God and Country ( $e = 10.16$ )  
e.g., "It is important to believe in some religion" (.70)  
e.g., "I would like a child of mine to go to church and to live according to the rules" (.70)  
e.g., "I like it better when people obey their government than when they question it" (.51)
- II. Competitive Spirit ( $e = 7.45$ )  
e.g., "It is good to compete with others" (.52)  
e.g., "It is not good for people to learn to compete with each other" (-.52)  
e.g., "I do not mind when people try to beat others at games" (.52)
- III. Social Disengagement ( $e = 5.80$ )  
e.g., "Other things may be more important to some people but being successful is very important to me" (-.53)  
e.g., "I don't enjoy frequent parties and social gatherings" (.52)  
e.g., "I do not care if I am successful as long as I am happy" (.50)
- IV. Self-Esteem ( $e = 5.40$ )  
e.g., "I am very satisfied with myself" (.68)  
e.g., "I like what I am" (.60)  
e.g., "Sometimes I wish I were someone else" (-.56)

And, for the child sample the factors were:

- I. Independence ( $e = 9.96$ )  
e.g., "I think people should refuse to obey all laws" (.46)  
e.g., "I admire people who do not obey all rules" (.45)  
e.g., "When I am working with others, I like to be the one who decides what to do" (.45)
- II. Social Engagement ( $e = 5.97$ )  
e.g., "I like to visit my friends" (.49)  
e.g., "I like to visit my friends often" (.44)  
e.g., "It is good for people to like someone at least some time during their lives" (.40)
- III. Materialistic Disengagement ( $e = 4.10$ )  
e.g., "I do not need money to be happy" (.50)  
e.g., "I do not need money or the things money can buy to be happy" (.49)  
e.g., "Money sometimes gets in the way of happiness" (.46)

Similarities between the adult and child factors suggested that a rerotation procedure described by Kaiser (1960) and Veldman (1967) might

be useful in bringing the item vectors of the two factor structures into better alignment. This procedure was applied in order to determine if combining the child and adult samples could be justified on the basis of similarities between factors. However, after the rerotation procedure was applied, the resulting relationships between factors were insufficient in number and strength to justify combining the child and adult data. Relationships between factors were noted, however, so that when significant results for both the child and adult sample did occur for related factors, these factors could be interpreted as essentially the same construct irrespective of sample.<sup>2</sup>

#### Method

The data to be reported were collected from 226 children and 137 adults who were permanent residents of the Austin, Texas, metropolitan area. These were the same respondents used for the factor analyses described above. Mean scores were computed for each factor and analyzed by regression analysis of covariance. This technique differs from the usual covariance procedure in that covariables are represented as binary vectors in a regression equation that is compared with "restricted" equations that successively drop out each set of covariable vectors. The percent of variance accounted for by the variable "dropped out" is the difference between the squared multiple R's of the full and restricted equations. The probability of this difference is identical to the level

---

<sup>2</sup>The rerotation procedure yielded several relationships between factors. These relationships are expressed as cosines that may be interpreted as correlations between factor variables derived from the two samples. Five moderate relationships were found after rerotation: Allegiance to God and Country related  $-.39$  to Independence, Allegiance to God and Country related  $.48$  to Materialistic Disengagement, Competitive Spirit related  $.70$  to Independence, Competitive Spirit related  $-.60$  to Materialistic Disengagement, and Social Disengagement related  $-.57$  to Social Engagement.



of probability that would be obtained had covariance analysis been computed in the usual manner. Advantages to regression covariance analysis are that (1) it provides a procedure for studying individuals who score at hypothetical levels of the covariables. For example, expected mean scores may be compared for a male and female who score at the mean of all covariables even though two such subjects were not present in the sample. And (2) it provides a procedure from which estimates of the percent of variance accounted for by particular sources of criterion bias are easily obtained.

Four influences upon child and adult values were studied.

1. Sex of respondent. Important value differences between males and females have long been noticed. That men and women hold some quite different values and value certain activities or goals in life differently is clear both to those who would like to decrease such differences and those who find them "natural" and desirable. It has been observed of school-age children that girls, on the average, tend to take their tasks and teachers' instructions in a more serious, biddable way than do boys (McCandless, Roberts and Starnes, 1972). Both what they want out of life and how they prefer to get it thus can affect their response to schooling. Therefore, this variable was included in the present study to determine its empirical effect upon the four adult and three child factors identified in this study.

2. Occupation of respondent (adult) or head of household (children). Research has demonstrated that there are substantial differences in many kinds of values between different occupational levels in the U. S. (Warner, Meeker and Eells, 1949). Such differences have been found to occur in rather similar fashion in several different societies (Peck, et al., 1973). This led the authors to include occupational differences in the present study. From biographical data the occupations of respondents and heads of

household were divided into three general categories. These categories were (1) laborer, for which typical responses were "carpenter," "electrician," "truck driver," and "laborer," (2) white collar, for which typical responses were "businessman," "office manager," "storekeeper," and (3) professional, for which the responses were "physician," "lawyer," and "professor."

3. Race. A large body of research has demonstrated value differences between North American Anglos and Mexi (Peck, 1967). Differences between Blacks and Whites have received considerable attention in the past decade but these differences need further elaboration. From biographical data subjects were divided among three races: Caucasian, Negro and Mexican-American. A small number of respondents not falling into any one of these categorizations were discarded from the sample. An insufficient number of adult Mexican-American respondents precluded using this group for statistical comparisons.

4. Religion. Studies (Morris, 1956) have shown significant religious differences in the value placed on loyalty to the established order, on individual autonomy, on materialism and on the value of religion in itself. Respondents in this study were asked to indicate their religion so that further differences could be elaborated for the value dimensions measured by the Home and School Value Scale. The respondents' religions were collapsed into four general categories: (1) Catholic, i.e., Roman and Greek Orthodox, (2) Protestant, i.e., Baptist, Lutheran, Methodist, Presbyterian, Episcopalian, Congregational, (3) other religions, i.e., Christian Scientist, Mormon, Jehovah's Witnesses and (4) no religion.

Differences between levels of each variable were tested for significance while all other group membership categories entered into the



computations as covariables. For example, to ascertain value differences between males and females, occupation, race and religion were the covariables. When the values of different races were studied, sex, occupation and religion were the covariables. Twenty-eight covariance analyses were completed, sixteen for the adult sample across four factors and twelve analyses for the child sample across three factors.

### Results

Only one significant difference occurred for the adult analyses. This difference was between blacks and Whites in their allegiance to God and country (Factor I). Black adults agreed significantly more ( $p < .001$ ) than did White adults with items that favorably represented God, law and order.

The effects of the four sources of influence on the formation of values in children are discussed below.

Sex. Inspection of Table 1 indicates that male children were significantly more independent than female children but that these groups did not differ in the extent to which they engaged in social activities (Factor II) or in the extent to which their happiness depended upon material possessions (Factor III). The results of Table 1 confirm popular beliefs about the independence of male children who are reaching the junior high school age.

TABLE 1

#### Influence of Sex on Child Values

Sex	N	Expected Factor Scores		
		I	II	III
Males	111	5.38	5.10	4.67
Females	115	4.04	5.22	5.01
Explained variation		4.7%	0.2%	1.7%
p		.002	.71	.13

Occupation of head of household. Table 2 indicates no significant difference between the children of laborers, white collar workers and professionals for any of the three factors. Expected values for Factor I suggest that white collar and professional children may be slightly less independent than the children of laborers.

TABLE 2

## Influence of Occupation on Child Values

Occupation	N	Expected Factor Scores		
		I	II	III
Laborers	193	4.80	5.13	4.85
White collar	23	4.10	5.37	4.70
Professional	10	4.13	5.14	5.23
Explained variation		0.6%	0.3%	0.4%
P		.64	.81	.77

Race. Significant differences occurred between Mexican-American, White and Black children in the extent to which they valued independence (Factor I). Expected scores in Table 3 indicate that Black children were the most independent, followed by Mexican-American and then White children. Both Blacks and Mexican-Americans valued independence significantly more than Whites ( $p < .01$ ),<sup>3</sup> while no significant value differences occurred between Mexican-American and Black children. Black children had slightly less of an interest in social activities than did White and Mexican-American children (Factor II) and no differences were apparent between the groups in their desire to disengage themselves from material possessions (Factor III).

<sup>3</sup>Scheffé's test for multiple comparisons (1959).

Scale items for Factor I suggest that both minority groups had a greater tendency than White children to "refuse to obey all laws," "admire people who break the rules," and to believe that "learning is a waste of time." Race explained 8.4% of the variance in Factor I responses, accounting for more variance than any other source for this factor.

TABLE 3  
Influence of Race on Child Values

Race	N	Expected Factor Scores		
		I	II	III
Mexican-American	121	4.96	5.24	4.88
White	47	2.94	5.26	4.83
Black	58	5.56	4.90	4.80
Explained variation		8.4%	1.2%	0.0%
p		.0002	.37	.99

Religion. Differences between religious categories were significant across all three factors with the greatest difference occurring in the extent to which children of different faiths like to engage in social activities. Religious membership was the only variable in the study that accounted for a significant proportion of the variance on Factor III, Social Engagement. Table 4 indicates that children who had no religion were most independent, followed by Catholics, Protestants and then by other faiths. Differences in independence between Catholics and Atheists (or Agnostics) were significant ( $p < .01$ ) as were differences between Atheists and other faiths ( $p < .01$ ). For Factor II Catholic children were most social in their values followed by Protestants, other religions, and then by those who had

no religion. Group differences were significant between Catholics and Atheists ( $p < .01$ ), between Protestants and Atheists ( $p < .01$ ) and between Atheists and those of other faiths ( $p < .05$ ). With respect to Factor III, Protestants were the most materially disengaged followed by Catholics, those of other religions and finally by those who had no religion. Two group differences were significant for Factor III--the first between Catholics and those of no religion ( $p < .05$ ) and the second between Protestants and those of no religion ( $p < .01$ ).

TABLE 4

## Influence of Religion on Child Values

Religion	N	Expected Factor Scores		
		I	II	III
Catholic	107	4.50	5.28	4.89
Protestant	71	4.41	5.38	5.08
None	25	6.40	4.20	4.24
Other	23	4.62	4.94	4.63
Explained variation		3.8%	10.2%	3.7%
P		.03	.0002	.05

The religious categories may be characterized in the following manner:

Catholic. Moderate independence, high social involvement, moderate material disengagement.

Protestant. Moderate independence, high social involvement, high material disengagement.

No religion. High independence, low social involvement, low material disengagement.

Other religion. Low independence, moderate social involvement, moderate material disengagement.

Across all group membership categories: Factor I was influenced most by race (8.4%); all sources together accounting for 17.5% of the variance. Factor II was influenced most by religion (10.2%); all sources together accounting for 11.7% of the variance. And, Factor III was influenced most by religion (3.7%); all sources together accounting for only 5.8% of the variance.

### Discussion

The results of this study indicate that children and adults, while having some values in common, generally hold different values and that these values are influenced by different sources. In the case of adults, only race was a significant influence upon values, and this influence was upon values pertaining to allegiance to God and country. Sex, occupation and religion apparently play little role in creating value differences among adults.

It should not be surprising that few value differences among adult groups exist. Adults, more so than children, have the opportunity to come in contact with heterogeneous value systems through interactions at work, during travel, and in social settings that can ameliorate differences between the sexes, occupations and religions. As children grow to adulthood, they are expected to become less ethnocentric and to broaden their experiences by interacting more frequently with those who hold values different from their own. The data in this study indicate that these experiences may be successful in creating a core of values held in common by all adults.

One noticeable exception to a homogeneous adult value structure occurred for minority group values pertaining to God and country. Here two broadly-based ethnic groups, i.e., Blacks and Mexican-Americans, held some values that were significantly different from the White majority. One is tempted to suggest that more adult interaction may occur between sexes, occupations and religions than between races.

This study should leave little doubt that the values of children are more easily influenced by their sex, race and religion than are adult values. In over half of the significant findings, differences between sex, race and religion occurred in the extent to which children valued their independence. The results confirm intuitions that (1) children growing into boyhood seek more independence in diverse ways than do their female counterparts, (2) Black and Mexican-American children, dramatically more so than White, exhibit a value of and desire for independence, (3) children who have no religion are significantly more independent than those who do and (4) a Black, male child who has no religion values law and order significantly less than his female, white counterpart who has a religion. Value differences between the religious categories lead one to speculate about the social and material beliefs held by these religious groups that create significant value differences among their congregations.

In addition to these findings an important reversal can be noted for Factor I in the child and adult samples. Black adults accepted law and order and valued God significantly more than White adults, but this tendency was reversed for children--Black children were more independent and less accepting of law and order than White children. An explanation for this finding may be that as Black children reach adulthood social experiences work to change their values toward the cultural norm of the majority. By



the time Black adults reach adulthood their independence may give way to feelings of dependency and they may become more dependent upon basic cultural values and less antagonistic toward authority than during their childhood.

However intuitively pleasing this rationale may be, at least one alternative explanation begs for attention. Recent history has seen almost cataclysmic changes in racial relations often foreshadowed by periods of intense frustration, demonstration and unrest within minority subcultures. Such visible forms of dissatisfaction as these may well have had profound influences upon the children in this study and their brothers and sisters at a time in their social development that may well lead them to carry their present values into adulthood. These values then--rather than the adult values reported here--may increasingly come to characterize adult minority groups in this country.

While one purpose of this study was to confirm long-held intuitions about the values of children and adults, another was to focus attention upon the extent to which minority groups hold values different from the majority. Even though many would argue that significant value differences between cultural subgroups are healthy indices in a pluralistic society, these differences may become dysfunctional when they represent disagreements about basic values that all groups are expected to share. Such is the case when children of two major ethnic groups differ from White majority children in the extent to which they accept law and order. One is prompted to speculate about the social and political variables that may have caused minority group values to be significantly different from those of Whites.

## References

- Bales, R. F., & Couch, A. S. The value profile: A factor analytic study of value statements. Sociological Inquiry, 1969, 39(1), 3-17.
- Kaiser, H. F. Relating factors between studies based upon different individuals. Unpublished manuscript, University of Illinois, 1960.
- McCandless, B. R., Roberts, A., and Starnes, T. Teachers' marks, achievement test scores, and aptitude relations with respect to social class, race, and sex. Journal of Educational Psychology, 1972, 63(2), 153-159.
- Morris, C. Varieties of human value. Chicago: University of Chicago Press, 1956.
- Peck, R. F. A comparison of the value systems of Mexican and American youth. Interamerican Journal of Psychology, 1967, I, 41-50.
- Peck, R. F. et al. A replication study of coping patterns in eight countries. Vol. V, A and B. Final report. Coping styles and achievement: A cross-national study of school children. (Project No. HRD-167-65, U. S. Office of Education Contract No. 5-85-063, and Texas Education Agency Contract No. 29390.) Personality Research Center, The University of Texas at Austin, 1973.
- Ryans, D. Home and school values scale. Educational Research and Development Center, University of Hawaii, Honolulu, Hawaii, 1970.
- Scheffe, H. The analysis of variance. New York: John Wiley, 1959.
- Veldman, D. J. Fortran programming for the behavioral sciences. New York: Holt, Rinehart & Winston, 1967.
- Warner, W. L., Meeker, M., & Eells, K. Social class in America. Chicago: Science Research Associates, 1949.